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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/767,555	01/29/2004	Joo S. Choi	303.873US1	5077
21186 7590 05/21/2007 SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, P.A. P.O. BOX 2938 MINNEAPOLIS, MN 55402			EXAMINER KROFCHECK, MICHAEL C	
			ART UNIT 2186	PAPER NUMBER
			MAIL DATE 05/21/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/767,555	Applicant(s) CHOI ET AL.	
	Examiner Michael Krofcheck	Art Unit 2186	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 12 April 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 81, 82, 92-161 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 81, 82, 92, 94, 96-113, 115-132, 134-179, 141, 153 is/are allowed.
- 6) ☐ Claim(s) 93, 95, 114, 133, 140-147, 154-161 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 June 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This office action is in response to the amendment filed on 4/12/2007.
2. Claims 1-80, 83-91 have been cancelled.
3. The specification and claims 81-82, 93, 95 have been amended.
4. The objections/rejections from the prior correspondence not restated herein have been withdrawn.

Claim Objections

5. Claim 159 is objected to because of the following informalities:
 - a. The limitation of claim 159 that "the second time includes at or substantially simultaneously with receiving a first falling edge of a second cycle of a clock signal," directly conflicts with that of its parent claim, claim 158 which says the same is a first rising edge. Did the applicant intend for the claim dependency of claim 159 to be on claim 154?

Appropriate correction is required.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

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Claims 93, 95, 114, 133 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. There is no explicit reference in the specification specifically stating that the number of address pins is restricted from being a multiple of the number of signals being received. The examiner invites the applicant to point out the exact location that this is stated, in the specification, if there is support for the limitation.

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 93 and 95 are rejected under 35 U.S.C. 112, second paragraph, as failing to set forth the subject matter which applicant(s) regard as their invention. Evidence that claims 93 and 95 fail(s) to correspond in scope with that which applicant(s) regard as the invention can be found in the reply filed on 4/12/2007. In that paper, applicant has stated that said claims recite, "wherein the number of command and address pins of the programmable memory device is not a multiple of the number of signals in the fully received active command signal, bank address signals, and row address signals," and this statement indicates that the invention is different from what is defined in the claim(s) because the claims only recite, "wherein J is not a multiple of the number of signals in the fully received active command signal, bank address signals, and row

address signals," and this is the first reference in each respective claim tree to 'J'. In other words 'J' does not refer to anything.

9. Claims 93, 95, 140-147, 154-161 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

10. Claims 140 and 154 recites the limitation "the F-bit word" in each claim. There is insufficient antecedent basis for this limitation in the claim.

11. Claims 145 and 160 recites the limitations "H" and "G" in each claim. There is insufficient antecedent basis for this limitation in the claim.

12. Claims 93, 95, 147, 161 recites the limitation "J" in each claim. There is insufficient antecedent basis for this limitation in the claim.

Allowable Subject Matter

13. Claims 81-82, 92, 94, 96-113, 115-132, 134-139, 148-153 are allowed.

Response to Arguments

14. Applicant's arguments filed 4/12/2007 have been fully considered but they are not persuasive.

15. Applicant argues with respect to the 112 first paragraph rejection of claims 93 and 95 that support for the number of command and address pins not being a multiple of the number of signals is found in claims 92 and 94 and figures 2-5. The examiner disagrees. Claims 92 and 94 make no mention of the number of pins not being a

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multiple of the number of signals and those claims were also not part of the originally filed application. Figures 2-5 merely show a timing diagram containing signals. There are no indications of a specific number of pins, how any pins may correspond to the number of signals, or that the number of pins cannot be a multiple of the number of signals.

Conclusion

16. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

17. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Krofcheck whose telephone number is 571-272-8193. The examiner can normally be reached on Monday - Friday.

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19. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matt Kim can be reached on 571-272-4182. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

20. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Michael Krofcheck



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